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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,367	10/30/2006	Kiminobu Hirata	050203-0140	5551

31824 7590 12/08/2008
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EXAMINER

TRAN, DIEM T

ART UNIT	PAPER NUMBER
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3748

MAIL DATE	DELIVERY MODE
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12/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

This office action is in response to an amendment filed on 9/3/08. In the amendment, claims 1, 2 have been amended and claims 3-5 have been canceled. Overall, claims 1, 2 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima (JP 2002-332825) in view of Mathes et al. (US patent 5,974,789).

Yajima discloses an exhaust gas purification apparatus of an engine comprising:
a nitrogen oxide reduction catalyst (16) arranged in an engine exhaust gas passage to reduce and purify nitrogen oxide in exhaust gas using a liquid reducing agent; a nozzle (18) having an injection hole that opens into the exhaust gas passage, and positioned on an exhaust gas upstream side of said nitrogen oxide reduction catalyst (16) (see Figure 1, pages 3, 4, par. [16]); an operating state detecting device detects an engine operating state (see page 4, par. [19]); a reducing agent injection-supply device that injection supplies the liquid reducing agent into the exhaust gas passage from said nozzle injection hole during operation of the engine according to an injection flow rate of the liquid reducing agent, based on the engine operating state detected by said operating state detecting device (see page 5, par. [21]), and a high pressure air supply

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device (024) that supplies high pressure air into said nozzle during operation of the engine when the injection flow rate of said liquid reducing agent from said reducing agent injection supply device becomes zero (see page 3, par. [12], page 7, par. [29]); however, fails to disclose a pressure-reducing device switchable to either let compressed air pass through directly, or to reduce the pressure to a predetermined pressure as it passes through, wherein said reducing agent injection supply device uses the reduced compressed air. Mathes teaches that a pressure-reducing device (50) is switchable to either let compressed air pass through directly, or to reduce the pressure to a predetermined pressure as it passes through, and a reducing agent injection supply device uses the compressed air that has been reduced in pressure to the predetermined pressure (see Figure 3, col. 5, lines 43-60).

It would have been obvious for one having ordinary skill in the art, to have utilized the teaching of Mathes in the Yajima system, since the use thereof would have contributed to stable operation of the spraying device.

Regarding claim 2, Mathes further teaches that said reducing agent injection-supply device reduces a pressure of compressed air to a predetermined pressure, and mixes the compressed air whose pressure is reduced with the liquid reducing agent to transform the liquid reducing agent into an atomized state, and then injection supplies the atomized liquid reducing agent from said nozzle injection hole (22) into the exhaust gas passage (see Figure 3).

Response to Arguments

Applicant's arguments filed on 9/3/08 have been fully considered but they are moot in view of a new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:00 a.m.- 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about

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the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 800-786-9199 (toll-free).

/Diem Tran/
Patent Examiner

/Thomas E. Denion/
Supervisory Patent Examiner, Art Unit 3748